

REMARKS/ARGUMENTS

As a result of the amendments made, the remaining claims in this application are claims 1-3, 6-7, 9-10, 12-15 and 17.

Reconsideration is requested of the rejection of claims 6-7 and 12 under 35 U.S.C. 112 as being indefinite. In the amendment filed April 7, 2003, Applicants explained how the mole ratio range of 4:3 to 1:10 was within the broader mole ratio of 6:5 to 1:2. Applicants respectfully request withdrawal of the rejection.

Reconsideration is requested of the rejection of the claims under 35 U.S.C. 103(a) as being unpatentable over Gutierrez et al. in combination with Wilson. The claims were previously amended so as to require that the amines used to make the dispersants have no more than 5 nitrogens. This clearly places the composition of the invention outside the scope of the Gutierrez et al. reference since Gutierrez, as set forth in line 30 of page 3, clearly requires that the polyamines used contain more than 6 nitrogens per molecule.

Applicants have surprisingly found that when a dispersant is prepared having the key parameters set forth in Claim 1, that is, a molar ratio within the range of 4:30 to 1:10, a polyalkenyl chain of 850 to 150 and a polyamine having a limited number of nitrogens as set forth in the claim, that a surprising dispersancy effect is observed when such dispersants are used with low sulfur fuels; comparative data clearly shows that the same effect is not obtained when the same dispersants are used with conventional high sulfur fuels.

The key issue here is whether Gutierrez et al. contains any suggestion as would motivate one to select particular dispersants set forth in Applicants' claims and use them in a low sulfur fuel to obtain the unexpected result demonstrated by Applicants. On page 4 of the Official Action the statement is made that "the skilled artisan would have been motivated with the teaching of Gutierrez to use a commercial TEPA or commercial PAM containing 3 to 5 nitrogen atoms that correspond to the nitrogen compound of the instant claims as the polyamine reactant for the dispersant additive, particularly if improved dispersancy was not a major concern in the fuel oil composition." Applicants fail to see any teaching in Gutierrez that supports this alleged motivation. Improved dispersancy is a concern in Applicants'

invention and the improved dispersancy is illustrated by the data presented in the specification which measures improvements in cleanliness of injector nozzles, and this improvement is obtained by using a narrowly defined dispersant additive category. The unexpected nature of the data is shown by comparing the dispersants of the invention with dispersants just outside the range of those claimed in the invention.

With respect to Gutierrez, neither the suggestion nor the expectation of success is found in this prior art reference. It is only found in Applicants' disclosure. Gutierrez, if anything, teaches that one would not expect to obtain improved results because of the clear statements made at page 4, line 15. Gutierrez indicates that dispersants with a high nitrogen content produced dispersants with improved dispersancy when compared to products derived from regular commercial PAM under similar conditions with the same polymer backbone. Similarly, at page 17, lines 1-2, the statement is made that the high nitrogen content dispersants made from heavy polyamine are superior to dispersants made from conventional polyamine mixtures. These statements must be given due consideration since they teach in a direction away from that achieved in accordance with Applicants' claimed invention. The detailed analysis of Applicants' examples and how they demonstrate the unobviousness of the invention is found in the Appeal Brief of record in this application and Applicants need not repeat these detailed arguments.

In view of the foregoing amendment and remarks, favorable action is courteously solicited.

Respectfully submitted



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